WHAT IS CLAIMED IS:

546 Q2

1. A shake correction device comprising:

an image sensing device for converting a subject image to image data;

a shake detecting section for detecting a shake state;

a prism portion for changing an angle of a light beam passing therethrough according to a voltage applied thereto;

an application voltage generating section for generating a voltage applied to said prism portion;

a storage section for storing the relation between the voltage applied to said prism portion and the deflection angle of the light beam passing through said prism portion;

a control section for determining a voltage to be applied to said prism portion based on an output of said shake detecting section and an output of said storage section and controlling said voltage generating section to generate the thus determined application voltage; and

a setting section for selectively setting one of an image sensing mode for image-sensing the subject image and a test mode for measuring the relation between the voltage applied to said prism portion and the deflection angle of the light beam passing through said prism portion which is stored in said storage

section by use of said image sensing device.

2. The shake correction device according to claim 1, wherein said shake detecting section includes a first shake angle detecting section for detecting a shake angle in a first axial direction and a second shake angle detecting section for detecting a shake angle in a second axial direction perpendicular to the first axial direction.

3. The shake correction device according to claim 2, wherein said prism portion includes a first prism for changing the angle of the light beam passing therethrough in the first axial direction and a second prism for changing the angle of the light beam passing therethrough in the second axial direction.

4. The shake correction device according to claim 3, wherein said first prism changes the light beam in a direction to cancel the shake angle detected by said first shake angle detecting section.

5. The shake correction device according to claim 3, wherein said second prism changes the light beam in a direction to cancel the shake angle detected by said second shake angle detecting section.

6. The shake correction device according to claim 1, further comprising a temperature measuring circuit for measuring a temperature of said prism portion.

7. The shake correction device according to

claim 6, further comprising a table data forming circuit for forming table data obtained by adding temperatures measured by said temperature measuring circuit to the relation between the voltage applied to said prism portion and the deflection angle of the light beam passing through said prism portion.

8. The shake correction device according to claim 1, wherein said shake detecting section detects a shake state occurring in an electronic still camera.

9. The shake correction device according to claim 1, wherein said shake detecting section detects a shake state occurring in a film camera.

10. An electronic still camera comprising:

an image sensing device for converting a subject image to image data;

a shake detecting section including a first shake angle detecting section for detecting a shake angle in a first axial direction and a second shake angle detecting section for detecting a shake angle in a second axial direction perpendicular to the first axial direction;

a prism portion for changing an angle of a light beam passing therethrough according to a voltage applied thereto;

a temperature measuring circuit for measuring a temperature of said prism portion;

an application voltage generating section for

generating a voltage applied to said prism portion;

a storage section for storing the relation between the voltage applied to said prism portion, the deflection angle of a light beam passing through said prism portion and the temperature of said prism portion;

a control section for determining a voltage to be applied to said prism portion based on an output of said shake detecting section and an output of said storage section and controlling said voltage generating section to generate the thus determined application voltage; and

a setting section for selectively setting one of an image sensing mode for image-sensing the subject image and a test mode for measuring the relation between the voltage applied to said prism portion and the deflection angle of the light beam passing through said prism portion which is stored in said storage section by use of said image sensing device.

11. The electronic still camera according to claim 10, wherein said temperature measuring circuit measures the temperature of said prism portion prior to the shake correcting operation by said prism portion.

12. The electronic still camera according to claim 11, further comprising an application voltage determining circuit for determining voltages to be applied to said first and second prisms by referring to

the application voltage and shake angle stored in said storage section based on the temperature measured by said temperature measuring circuit.

13. The electronic still camera according to claim 12, wherein said application voltage determining circuit determines a first application voltage (centering voltage) which prevents said prism portion from changing the angle of the light beam passing therethrough.

14. The electronic still camera according to claim 13, wherein said application voltage generating section generates a first application voltage determined by said application voltage determining circuit.

15. The electronic still camera according to claim 12, wherein said application voltage determining circuit determines a second application voltage which permits said prism portion to change the angle of the light beam passing therethrough.

16. The electronic still camera according to claim 15, wherein said application voltage generating section generates a second application voltage determined by said application voltage determining circuit.

17. The electronic still camera according to claim 16, wherein said application voltage generating section is operated from the start of the image-sensing

operation of said image sensing device to time when a preset shutter period is reached.

18. The electronic still camera according to claim 10, wherein said prism portion includes a first prism for changing the angle of the light beam passing therethrough in the first axial direction and a second prism for changing the angle of the light beam passing therethrough in the second axial direction.

19. The electronic still camera according to claim 18, wherein said first prism changes the light beam in a direction to cancel the shake angle detected by said first shake angle detecting section.

20. The electronic still camera according to claim 18, wherein said second prism changes the light beam in a direction to cancel the shake angle detected by said second shake angle detecting section.

21. A film camera comprising:

a shake detecting section including a first shake angle detecting section for detecting a shake angle in a first axial direction and a second shake angle detecting section for detecting a shake angle in a second axial direction perpendicular to the first axial direction;

a prism portion for changing an angle of a light beam passing therethrough according to a voltage applied thereto;

a temperature measuring circuit for measuring

a temperature of said prism portion;

an application voltage generating section for generating a voltage applied to said prism portion;

a storage section for storing the relation between the voltage applied to said prism portion, the deflection angle of a light beam passing through said prism portion and the temperature of said prism portion; and

a control section for determining a voltage to be applied to said prism portion based on an output of said shake detecting section and an output of said storage section and controlling said voltage generating section to generate the thus determined application voltage;

wherein one of an image sensing mode for image-sensing a subject image and a test mode for measuring the relation between the voltage applied to said prism portion and the deflection angle of the light beam passing through said prism portion which is stored in said storage section is selectively set by use of an external control device provided separately from the film camera.

22. The film camera according to claim 21, wherein an image sensing unit including an image sensing device and image sensing device controlling circuit is mounted on the film camera at the time of test mode.

23. The film camera according to claim 22, wherein

the test mode is executed by use of said image sensing unit.

24. The film camera according to claim 21, wherein said prism portion includes a first prism for changing the angle of the light beam passing therethrough in the first axial direction and a second prism for changing the angle of the light beam passing therethrough in the second axial direction.

25. The film camera according to claim 24, wherein said first prism changes the light beam in a direction to cancel the shake angle detected by said first shake angle detecting section.

26. The film camera according to claim 24, wherein said second prism changes the light beam in a direction to cancel the shake angle detected by said second shake angle detecting section.

27. An optical device comprising:

a shake detecting section including a first shake angle detecting section for detecting a shake angle in a first axial direction and a second shake angle detecting section for detecting a shake angle in a second axial direction perpendicular to the first axial direction;

a prism portion for changing an angle of a light beam passing therethrough according to a voltage applied thereto;

an afocal optical system disposed behind said

prism portion;

a collimator lens disposed between said afocal optical system and an image sensing device, for forming an image on the image sensing device by use of parallel light emitted from said afocal optical system;

a temperature measuring circuit for measuring a temperature of said prism portion;

an application voltage generating section for generating a voltage applied to said prism portion;

a storage section for storing the relation between the voltage applied to said prism portion, the deflection angle of a light beam passing through said prism portion and the temperature of said prism portion;

a control section for determining a voltage to be applied to said prism portion based on an output of said shake detecting section and an output of said storage section and controlling said voltage generating section to generate the thus determined application voltage; and

a setting section for setting a test mode for measuring the relation between the voltage applied to said prism portion and the deflection angle of the light beam passing through said prism portion which is stored in said storage section by use of said image sensing device.

28. The optical device according to claim 27,

wherein said prism portion includes a first prism for changing the angle of the light beam passing therethrough in the first axial direction and a second prism for changing the angle of the light beam passing therethrough in the second axial direction.

29. The optical device according to claim 28, wherein said first prism changes the light beam in a direction to cancel the shake angle detected by said first shake angle detecting section.

30. The optical device according to claim 28, wherein said second prism changes the light beam in a direction to cancel the shake angle detected by said second shake angle detecting section.

31. The optical device according to claim 27, wherein the optical device is a binocular.

32. The optical device according to claim 27, wherein the optical device is a telescope.

33. An optical device comprising:

an image sensing device for converting a subject image to image data;

a shake detecting section for detecting a shake state;

a prism portion for changing an angle of a light beam passing therethrough according to a voltage applied thereto;

an application voltage generating section for generating a voltage applied to said prism portion;

a storage section for storing the relation between the voltage applied to said prism portion and the deflection angle of the light beam passing through said prism portion;

a control section for determining a voltage to be applied to said prism portion based on an output of said shake detecting section and an output of said storage section and controlling said voltage generating section to generate the thus determined application voltage; and

a setting section for selectively setting one of an image sensing mode for image-sensing the subject image by use of said image sensing device and a test mode for measuring the relation between the voltage applied to said prism portion and the deflection angle of the light beam passing through said prism portion which is stored in said storage section by use of said image sensing device.

34. A shake correction method in an optical device having a prism portion for changing an angle of a light beam passing therethrough according to a voltage applied thereto, comprising:

a shake detecting step of detecting a shake state;

an application voltage determining step of determining a voltage to be applied to the prism portion based on shake information detected by said shake detecting step;

a voltage applying step of applying an application voltage determined by said application voltage determining step to the prism portion;

a shake correcting step of effecting a shake correcting process by use of the prism portion in response to application of the voltage in said voltage application step; and

a data forming step of forming data indicating the relation between the voltage applied to the prism portion and the shake amount which is referred to in said application voltage determining step.